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NOZZLE CONTAINER WITH FLEXIBLE TELESCOPING POURING SPOUT

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Fig. 1

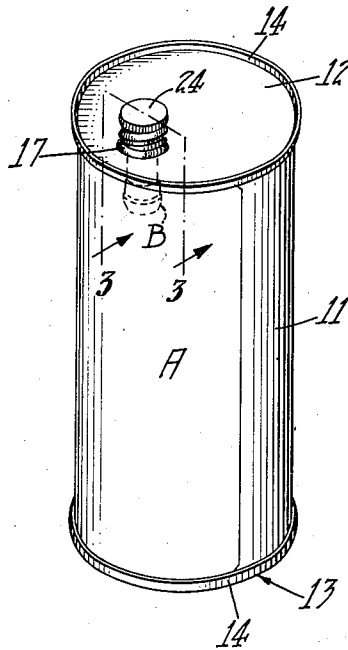


Fig. 2

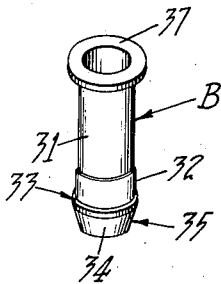


Fig. 3

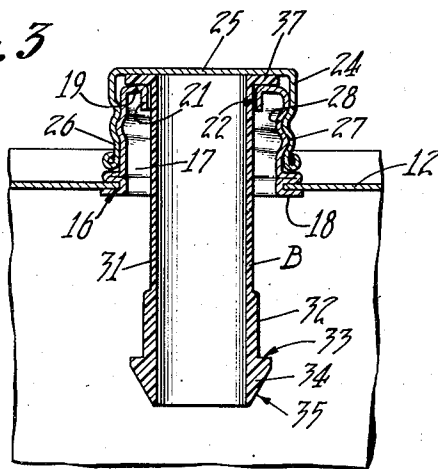
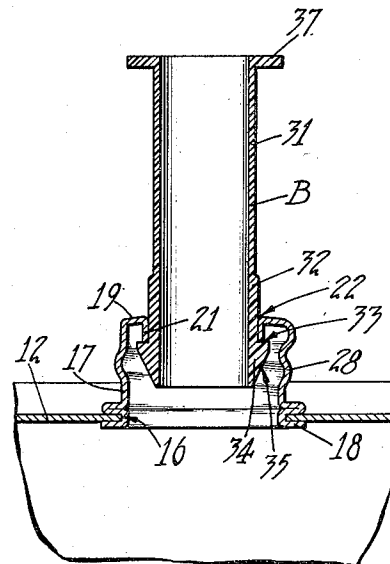


Fig. 4



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NOZZLE CONTAINER WITH FLEXIBLE TELESCOPING POURING SPOUT

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4 Claims. (Cl. 222—525)

The present invention relates to containers having nozzles embodying retractable, telescoping or extensible pouring spouts for dispensing the contents of the containers and has particular reference to a flexible or resilient tubular pouring spout. This is an improvement over the pouring spout disclosed in United States Patent 1,773,846 issued August 26, 1930, to Henry M. Nicholls.

In the manufacture of containers having telescoping or extensible pouring spouts, the spouts are usually made of sheet metal and slidably embodied in a nozzle which is secured to the container and which is closed and sealed with a screw cap. In spouts of this character it is difficult to provide for a leakproof fit around the mouth of the nozzle while simultaneously providing for easy sliding of the spout in the nozzle. Another difficulty is in providing means for retaining the spout in the nozzle and for easy assembling of the spout with the nozzle.

An object of the instant invention is the provision of a telescoping pouring spout which overcomes these difficulties wherein the pouring spout is made of a flexible or compressible material and is so proportioned that it may be readily pressed into place within the mouth of a nozzle after the nozzle is secured to the container.

Another object is the provision of such a pouring spout for a nozzle container wherein the spout is loosely supported in the nozzle for easy sliding movement therein but upon withdrawal into extended dispensing position, fits tightly in the nozzle mouth in leakproof frictional engagement with the nozzle, without requiring a separate gasket, to hold the spout in extended position and to facilitate dispensing of liquid products without leakage around the spout.

Another object is the provision of such a pouring spout for a nozzle container wherein a flange portion on the nozzle serves a dual purpose of retaining the spout in retracted or non-pouring position and more importantly providing a gasket for the cap which closes the nozzle, so that the usual separate expensive gasket in the cap may be eliminated.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

Figure 1 is a perspective view of a nozzle container sealed with a screw cap and fitted with a telescoping pouring spout embodying the instant invention;

Fig. 2 is a perspective view of the pouring spout used in the container shown in Fig. 1;

Fig. 3 is a sectional view taken along a vertical plane indicated by the lines 3—3 in Fig. 1 with parts broken away; and

Fig. 4 is a view similar to Fig. 3 having the cap removed from the nozzle and showing the pouring spout extended outwardly in dispensing position.

As a preferred or exemplary embodiment of the invention the drawings illustrate a container A (Fig. 1)

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having an extensible pouring spout B (Fig. 2) for holding and dispensing liquid contents although the invention is equally well adapted to dry and granular products and other substances. The container preferably comprises a cylindrical sheet metal body 11 having top and bottom end members 12, 13 respectively secured thereto in suitable end seams 14.

The top end member 12 preferably is provided with a dispensing opening 16 (Figs. 3 and 4) having secured therein in any suitable manner, a sheet metal nozzle 17 which projects upwardly above the top of the container. At its lower end the nozzle 17 preferably is attached to the top end member 12 by an interlocking of a flange 18 of the nozzle around the edge of the top end member defining the opening 16. At its upper end the nozzle 17 is formed with an inwardly and slightly upwardly inclined flat flange, rim or seat 19 which merges into a short depending skirt 21 defining a mouth 22 for the nozzle.

The nozzle 17 is provided with a gasketless screw cap 24 having a flat imperforate top 25 and a depending skirt 26 which extends down around the nozzle 17. The skirt 26 is formed with screw threads 27 for cooperative action with similar screw threads 28 in the nozzle 17 for securing the cap to the nozzle to close the container.

The extensible spout B when assembled with the container is located in the mouth 22 of the nozzle 17, and is preferably made of a resilient compressible or flexible plastic material commercially known as "polyethylene" or other suitable substance. The spout B preferably is made in one-piece and comprises a cylindrical tubular seamless body 31 of a uniform diameter slightly smaller than the inside diameter of the nozzle skirt 21, for a loose fit in the nozzle mouth 22.

Adjacent its lower end the spout body 31 is formed with a thickened friction portion or collar 32 of a diameter substantially equal to or slightly larger than the inside diameter of the nozzle skirt 21 to produce a tight friction fit against the nozzle skirt. The lower end of this friction collar 32 merges into an annular stop shoulder 33 having an external diameter substantially greater than the diameter of the mouth 22 of the nozzle 17 and constitutes a portion of an inserting head 34 formed on the inner terminal end of the spout. The head 34 is provided with a downwardly and inwardly tapered outer face 35 to facilitate insertion of the spout within the nozzle mouth 22. At its upper end, the spout body 31 is formed with an annular flange 37 of an external diameter slightly less than the outside diameter of the nozzle 17 for overlapping engagement with the seat 19 of the nozzle.

The extensible spout B is adapted to be inserted into the nozzle mouth 22 after the nozzle 17 is assembled with the container as shown in Fig. 3. When the spout is in fully assembled relation with the nozzle as shown in Fig. 3, its top flange 37 rests on top of the seat 19 of the nozzle and thus prevents the spout from falling all the way into the container. In this position the spout flange 37, being also of a resilient nature, serves as a gasket for the cap 24. The flange 37 thereby eliminates the extra need and cost of a separate gasket in the cap as is usually provided. A similar separate gasket is also eliminated at the bottom end of the spout B, the thickened compressible collar 32 taking the place of such a gasket when the spout is in extended position (Fig. 4).

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When it is desired to dispense the contents of the container A, it is merely necessary to remove the cap 24, and lift the spout B, by its flange 37, into the dispensing position shown in Fig. 4. In this position, the stop shoulder 33 of the spout head 34 is in tight engagement with the lower terminal edge of the nozzle skirt 21 and the integral friction collar 32 of the spout is wedged tightly against the inner face of the nozzle skirt 21 thereby providing a liquid tight fit of the spout within the nozzle mouth 22 which retains the spout in its extended dispensing position and simultaneously prevents leakage of the container contents around the spout in the mouth of the nozzle.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A container comprising a top end member having an upstanding nozzle provided with a dispensing mouth, and a telescoping pouring spout slidably disposed in said mouth, said spout having a tubular body of smaller diameter than said mouth for easy sliding movement of said spout in said mouth, said spout body at its inner end having an enlarged friction collar of a diameter substantially equal to the diameter of said mouth for frictional engagement with the inner nozzle wall surrounding said mouth to frictionally hold said spout in an extended leak-proof dispensing position, said spout being integrally formed of compressible resilient plastic material and terminating at its inner end in an enlarged inwardly tapered head portion surrounding said spout end to facilitate its insertion when compressed into said nozzle mouth to permanently assemble said spout and nozzle in operative relation.

2. A one-piece, seamless, flexible telescoping pouring spout for a container having a nozzle formed with a dispensing mouth to be sealed by a removable gasketless cap, comprising in combination a tubular cylindrical body of a uniform diameter slightly less than the diameter of the mouth of said nozzle to facilitate sliding of said body in said mouth, said body at one end having an integral compressible inserting head of a diameter greater than the diameter of said mouth and provided with a tapered face to facilitate passage of said head into and through said mouth to assemble said spout with said nozzle, said head after insertion through said mouth serving to limit the extensibility of said spout in said nozzle, said body at its opposite end having an integral flange extending outwardly from said body and disposable between the rim of said nozzle and the top of said cap when the cap is applied to the nozzle to provide a leak-proof gasket for said cap, and a friction collar on said body adjacent said inserting head, said collar having a

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uniform diameter substantially equal to the diameter of said mouth for tight frictional engagement therein when the spout is extended into pouring position to hold said spout against retraction and to provide a leakproof seal between said collar and said nozzle.

3. A container having a nozzle provided with a circular dispensing mouth surrounded by a sealing seat for a gasketless closure cap, said seat terminating in an annular depending skirt defining said mouth, and a telescoping tubular pouring spout of resilient compressible plastic material slidable within said mouth, said spout having an annular resilient flange overlapping said sealing seat to constitute a gasket for said closure cap for sealing said mouth when said spout is in a retracted position within said nozzle with said closure cap applied to said nozzle, the inner end portion of said spout having an enlarged integral cylindrical head of slightly greater diameter than the diameter of said nozzle mouth, said head tapering inwardly toward the inner spout end having a diameter slightly less than that of said mouth to facilitate yieldable insertion of said spout end portion through said mouth to assemble the spout on the nozzle, said enlarged cylindrical head terminating at its outer end in a stop shoulder engageable with said nozzle spout to prevent inadvertent withdrawal of the inserted spout from said nozzle.

4. A container body having an upstanding nozzle provided with a dispensing mouth defined by an annular depending skirt on the outer end of said nozzle, and a flexible telescoping pouring spout integrally formed of compressible plastic material and having a seamless tubular body of smaller diameter than said mouth to facilitate sliding of said body therein, the inner end portion of said spout having an enlarged integral cylindrical head of slightly greater diameter than the diameter of said nozzle mouth, said head tapering inwardly toward the inner spout end having a diameter slightly less than that of said mouth, said tapered cylindrical head being compressible into reduced diameter by movement through said mouth upon endwise pressure applied to said spout in the direction of said nozzle for movably assembling said spout within said nozzle, the outer end of said tapered head terminating in a stop shoulder engageable with said depending nozzle skirt for locking the assembled spout against complete withdrawal from said nozzle, the outer end of said spout body having a flange overlapping said nozzle for retaining said spout in retracted position therein.

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